

11/09/2012

**State of Louisiana  
Department of Transportation and Development (DOTD)  
Traffic Operations Approved Product List (TOAPL) Qualification Procedure  
for  
TOAPL 1**

**12 IN LED TRAFFIC SIGNAL LAMP UNIT**

**MATERIAL SPECIFICATION REFERENCE:**

Louisiana Department of Transportation and Development Traffic Control Standard Number 42 (TCS No.42) for 12 INCH (300mm) LED Traffic Signal Lamp Unit.

**GENERAL:**

Upon completion of the evaluation, the submitter will be notified in writing concerning the results of the evaluation and whether the product will or will not be added to the TOAPL. The Department reserves the right to reevaluate any product at any time. Approval of a product is not blanket approval for its use.

**DISQUALIFICATION:**

Any product may be removed from the TOAPL for non-conformance with the specifications and/or performance requirements. The Department must be notified in writing of any name change or change in product formulation. Significant changes may require reevaluation of the product.

Manufacturers may be taken off the TOAPL if LADOTD observes a 5% or greater unit failure rate within a period of 90 days after unit is placed in operation.

**REQUALIFICATION:**

Any product which has been disqualified and/or removed from the TOAPL will be considered for reevaluation only after submission of a formal request along with acceptable evidence that the problems causing the disqualification and/or removal have been resolved.

**EVALUATION TIME:**

Laboratory Testing - 4 weeks

**PRELIMINARY REQUIREMENTS:**

**The manufacturer requesting product consideration for the TOAPL must supply the following prior to evaluation:**

**Qualified Product Evaluation Form**

A standard "Traffic Operations Approved Product List (TOAPL) Evaluation Form" must be submitted to the LADOTD Traffic Operations Section Coordinator listed below, along with a letter requesting evaluation for the TOAPL.

**Product Data Sheets**

Product data sheets must be supplied and provide all pertinent information relative to the product to be evaluated; including, but not limited to, manufacturer's specifications and a Materials Safety Data Sheet (MSDS).

If requested, manufacturer shall supply schematics for all electronics.

#### **Certification and/or Test Reports**

Each product submitted shall be certified through the LED Traffic Signal Modules Certification Program administered by Intertek (ETL). Certification must list the results for each requirement of the specification. A copy of the most current applicable page of Intertek's Directory of LED Traffic Signal Modules Certified Products listing the module submitted must be provided.

A copy of the lab test report from an independent lab for each LED traffic signal lamp unit model must also be provided. Report shall include documentation of the light intensity values at each I.T.E. specific distribution test point, the current, voltage, and total harmonic distortion (THD) for each test point, as well as the power factor (PF) associated with each model. Tests performed by the independent lab shall follow all the instructions documented in the latest ITE VTCSH Circular Signal Supplement or latest ITE VTCSH Arrow Supplement as it pertains to the product being tested. The lab reports and all supporting documents should be provided with the sample.

#### **Warranty Compliance Documentation**

Manufacturer must comply with all requirements of the following warranty in order to be accepted to the TOPAL: The manufacturer/supplier shall submit a letter of compliance indicating understanding and willingness to abide by the provisions of the referenced specification. The manufacturer shall provide name and telephone number of the person to contact regarding potential claims under the provisions of this warranty. The compliance letter shall be addressed to:

**Louisiana Department of Transportation and Development**

**Section 45, Traffic Operations**

**ATTN: Signal Engineering - Steve McCarroll**

**7686 Tom Drive**

Baton Rouge, Louisiana 70806 The LED traffic signal lamp units shall be warranted against any failure due to design, workmanship, material defects, or intensity within the first 60 months from date of delivery. LED traffic signal lamp units shall meet or exceed minimum requirements of this specification for a period of no less than 60 months from date of installation.

Repair or full replacement will be required if a LED traffic signal lamp unit fails to operate as specified under normal operating conditions. Repaired or replaced LED traffic signal lamp units will be provided at no cost to LADOTD. The replaced or repaired LED traffic signal lamp units will inherit the remainder of the failed LED traffic signal lamp unit's warranty.

LED traffic signal lamp units shall be repaired or replaced within 5 business days after receipt of failed LED traffic signal lamp unit/s at no cost to LADOTD. The cost of shipping the LED traffic signal lamp units will be borne by the vendor or manufacturer.

If a LED traffic signal lamp unit fails with no visible damage to electronic/electrical components or wiring (not including fuses or components designed to act as a fuse), then the LED traffic signal unit is considered to have failed under normal operating conditions. A blown fuse or a component acting as a fuse, without any other permanent failure to electrical/electronic components shall be considered to have failed under normal operating conditions. Acts-of-God will not be accepted as excusable unit failures without visible damage.

**Additional Documentation**

A letter of compliance with the required warranty as defined below shall contain the contact name, address, telephone number and e-mail address or webpage for the representative, manufacturer, or distributor for warranty repair.

The manufacturer shall submit a certification document with each lot or shipment stating that the LED traffic signal lamp units provided meet all the requirements of this specification. The certification document shall show individual lot numbers and manufacturer dates.

**Product Sample**

Sample to be furnished at no cost to the Department.

Manufacturer must submit one sample of each type/color lamp unit to be tested. LED traffic signal lamp units tested or submitted for testing shall be representative of typical production units. If the product passes specifications, the sample will be held as a laboratory standard for future reference. LADOTD reserves the right to dispose of any sample at any time after testing.

**TESTING REQUIREMENTS:****Laboratory Testing**

Optical testing shall be performed with LED units mounted in standard traffic signal sections without visors or hoods attached to the signal sections.

The LED will be visually inspected for conformance with the referenced specifications.

**Quality Assurance Testing**

LADOTD may perform random sample testing on shipments and units installed in the field.

The number of modules tested shall be determined by the quantity of each model in the shipment. The sample size shall conform to ANSI/ASQC Z1.4. LADOTD Traffic Operations shall determine the sampling parameters to be used for the random sample testing. All parameters of the specification may be tested on the modules. Acceptance or rejection of the shipment shall conform to ANSI/ASQC Z1.4 for random sampled shipments.

LADOTD reserves the right to select a sample from the field during the warranty period and perform tests to determine extended compliance and/or deterioration of the LED traffic signal lamp units.

**Louisiana Department of Transportation and Development**

**Traffic Operations Section**

**Attn: Stephen McCarroll – TOAPL Coordinator**

**7686 Tom Drive**

**Baton Rouge, LA 70806**

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**Approved 01-06-10**  
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